RAJAVEE SRIVASTAVA

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SUMMARY

- Computational Biology enthusiast with a varied background in biology including Immunology, Microbiology and Molecular Biology.
- Working towards optimizing the prediction of unique drug binding sites in highly homologous proteins using an unbiased approach
- Worked on identification of uncommon epitopes for a stable immune response through MHC1 binding for Covid19 as a part of a 5 week virtual global internship
- Trained 50+ student in the basic skills of Bioinformatics as a part of 3 day hands on workshop conducted during the college tech fest CHIASMA '20
- Trained in Molecular medicine protocols including RT-PCR tests, HLA Typing, Karyotyping and Biochemical tests during Summer training at Reliance Life Sciences, Mumbai.

TECHNICAL SKILLS

- **Proteomics and Vaccine Dev:** Molecular docking, Virtual screening of small ligand databases, Protein-protein interactions, Epitope identification, Antigenicity analysis.
- **Computational:** Programming language (Python), Webscraping using Selenium and BeautifulSoup
- **Cell Biology:** Cell culture, Cell assays.
- **Microscopy/Imaging:** Confocal microscopy, Cell imaging and analysis
- **Immunology:** ELISA Analysis, Flow Cytometry (FACs) analysis
- **Biochemistry:** Enzymatic assays
- **Molecular biology:** Conjugation and Transduction experiments

RESEARCH EXPERIENCE

Master's Thesis   **Research Project**
Research Student   *August'21 - Present*
- Identification of unique sites on pathogenic bacterial GTPases for species specific drug development using an unbiased approach.
- Developed the code to automate the process of domain alignments and prediction of variable regions on the protein structures.

HackBio   **Virtual Internship**
Research Intern   *Aug - Sep 2020*
- Identified 10 unknown epitopes from non-structural proteins of the Coronavirus proteome that were highly antigenic and immunogenic.
- Generated structure of reviewed non structural protein sequences from Uniprot using homology modelling protocols.
- Protein structures have been submitted at Proteopedia

Semester project   **Ahmedabad University**
Research student   *Jan - May 2020*
- Worked towards characterization of pharmacophores of Withanone and Withaferin A from *Withania somnifera*
- Identification of structurally similar ligands from PubChem database that had better interactions with cancer targets in comparison to withanolides using virtual screening protocols.

EDUCATION

Integerated Master's in Life sciences   **CGPA 3.2/4.00**
Ahmedabad University   *July 2017 - May 2022*
 Cell Biology, Molecular Biology, Immunology, Toxicology, Computational and Structural Biology, Bioinformatics and Microbiology as core subjects.

Higher Secondary Certificate   **CGPA 3.18/4.00**
Baroda Lions School   *June 2017*
 Physics, Chemistry, Biology and Computer Science as core subjects.

POSITION OF RESPONSIBILITY

- Feb 2020 - Was a trainer for the Life in Bytes workshop at the student organized techfest Chiasma, with participants from pan-India. Explained the basics of Computational Biology including Molecular docking and Homology modelling protocols to 50+ student from different fields of biology.
- August 2019 - Core committee member of The Management Club of Ahmedabad University. Coordinated and managed various club events throughout the year. Received the Chairman's recognition award for the best performing student club for that year.

SKILLS

Software   Microsoft Excel, Word and PowerPoint, Biovia Discovery Studio, PyMol, Autodock, PyRx.
Languages   English: professional proficiency. Hindi: native. Gujarati: conversational.